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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/684,173	10/06/2000	James R. Kittrell	00-625	3692

7590 07/23/2002

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EXAMINER

TRAN, THAO T

ART UNIT	PAPER NUMBER
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1711

DATE MAILED: 07/23/2002

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Please find below and/or attached an Office communication concerning this application or proceeding.

ME 4

Office Action Summary	Applicati n No.		Applicant(s)	
	09/684,173		KITTRELL, JAMES R.	
	Examiner		Art Unit	
	Thao T. Tran		1711	

-- The MAILING DATE of this communication appears on the cover sheet with th correspondenc address --

Period f r Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on The Amendment received on 10 May 2002.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 27 and 28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 27-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. This is in response to the Amendment received on May 10, 2002. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office Action.
2. Claims 27-28 are currently pending in this application. Claims 29-30 have been canceled.

Claim Rejections - 35 USC § 102

3. In view of the prior Office Action of December 26, 2002, the rejection of claims 27-28, under 35 USC 102, has been withdrawn due to the Amendment made thereto.

Claim Rejections - 35 USC § 103

4. Claims 27-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kanno in view of Chopin.

Kanno teaches a catalyst, comprising titania, silica, and tungsten oxide; wherein there are 0.5 to 15 parts by weight of silica to titania 100 parts by weight, and 20-95 mol % Ti (upper limit is about 75%) and 80-5mol % W (lower limit is about 25%), which read on the instantly claimed ranges (see col. 2, ln. 21-47; col. 3, ln. 6-38).

Kanno differs from the present invention because the reference does not teach the catalyst comprising platinum or palladium.

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Chopin teaches a catalyst, comprising silica, titania, tungsten oxide, and platinum; wherein the mass of platinum with respect to that of titania is between 0.01 to 5% (see col. 3, ln. 10-22; col. 4, ln. 40-61).

Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to have included platinum as taught by Chopin into the catalyst of Kanno, because it has been within the skill in the art that the use of platinum or a noble metal as a catalyst or catalyst component would enhance the rate of the chemical reaction and also would enhance durability of the catalyst.

Moreover, it has been held that combining known ingredient having known functions, to provide a composition having the additive effect of each of the known functions is within realm of performance of ordinary skill artisan. In re Castner, 186 USPQ 213 (217). And, the use of conventional materials to perform their known functions in a conventional process is obvious. In re Raner, 134 USPQ 343 (CCPA 1962).

5. Claims 27-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chopin in view of Kanno.

In view of the prior Office Action of December 26, 2002, the rejection to claims 27-28 has been withdrawn.

Response to Arguments

6. Applicant's arguments filed on May 10, 2002 have been fully considered but they are not persuasive.

On page 4 of the Remarks, applicant contends that Kanno differs from the present invention because the reference teaches the titanium particles being coated with a porous layer of silica and tungsten oxide. Applicant's contention is correct. However, the claim language is not directed to whether there is a porous layer silica and tungsten on titanium or not. Applicant alleges at page 4, 3rd full paragraph, of the Remarks that the "claimed range of the present application of 10 to 50% weight tungsten oxide will be reduced to 10-25% weight tungsten oxide on Ti". However, the amendment of claim 27 now embraces verbatim the compositional limitations of the tungsten oxide as originally claimed in claim 27.

Applicant further argues that since silica content is up to 70% indicating that silica is the primary constituent. However, the claimed range of silica is 0.1-70%, which indicates that silica is not always the primary constituent of the catalyst.

In response to applicant's argument that the examiner's combining of Chopin with Kanno is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971). In this case, as indicated in paragraph 4 above, Chopin is used to

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illustrate that the use of platinum in addition to other photocatalysts has been taught in the prior art as a catalyst component to enhance the reaction rate and also the durability of the catalyst.

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thao T. Tran whose telephone number is 703-306-5698. The examiner can normally be reached on Monday-Friday, from 8:30 a.m. - 5:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on 703-308-2462. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

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July 19, 2002

A large, stylized handwritten signature in black ink, appearing to read "Nathan M. Nutter".

NATHAN M. NUTTER
PRIMARY EXAMINER
GROUP ~~1711~~ 1711